

9.1 Overview of Layton

Geography

Layton comprises just 85 acres in area. Layton is building almost entirely on waterfront property, mostly canals. It is low-lying, with all land below about 6 feet above mean sea (MSL).

Population

Layton has a permanent resident population of 192. The seasonal population increases to as much as 250. Current population projects indicate the permanent population may grow to 205 by 2010.

In 2004, the Monroe County Social Services registered just one person people in the Layton area as having special needs for hurricane assistance.

Land Use & Economy

Layton's development is primarily single family residences located along canals and small businesses (restaurants and convenience stores).

Future growth is limited through the Rate of Growth Ordinance to implement portions of the City's Comprehensive Plan. ROGO, as the ordinance is called, establishes a building permit allocation system for residential construction. The purpose is to encourage in-fill of platted lots served by existing infrastructure and to limit growth to enable safe and timely hurricane evacuation. Pursuant to ROGO and an agreement between the City, County and the department of Community Affairs, the annual allocation for Layton is three permits per year for residential dwelling units.

All new construction, reconstruction, and improvements to existing buildings must comply with the current building code requirements.

Layton joined the National Flood Insurance Program in July 1971 and administers a floodplain management ordinance that meets or exceeds the minimum federal requirements.

9.2 City Organization and Agencies

Layton's City Council is composed of 6members, including the Mayor who is elected specifically to that office. The City Council sets government policy and adopts guidance documents, such as the Comprehensive Plan (1996) and ordinances establishing various codes and standards.

Layton is organized into several agencies, each with authorized responsibilities that, as described below, have bearing on how natural hazards are recognized and addressed.

Mayor. The Mayor implements the policies of the Commission and administers the overall operations of the City. In fulfilling these duties, the City Manager:

Layton Planning Department. The Planning Department is responsible for the development and maintenance of the City's Comprehensive Plan.

City Building Official. The Building Official reviews construction plans, issues permits, and inspects projects for compliance. Layton has adopted the Florida State Building Code. The Department is responsible for enforcing zoning and building standards and the Land Development Regulations.

Layton , Florida	
<ul style="list-style-type: none"> • <i>Building Department has 1 staff member</i> • <i>Planning Department has 1 staff member</i> • <i>Code Enforcement Department has 1 staff member and an appointed Code Enforcement Board</i> 	

Table 9-1. Layton: Permits Issued (2003, 2004).

	Calendar Year 2003	Calendar Year 2004
New single-family, detached	0	8
New single-family, attached	0	0
Multi-family (2 or more)	0	0
Non-residential (all types)	0	0
Residential (additions, alterations, repairs)	19	23
Non-residential (additions, alterations, repairs)	0	0
Demolition	0	0
Relocation	0	0
Mobile home (permanent/temporary)	0	0
Total Permits Issued	19	31

9.3 Hazards and Risk in Layton

Historic Storms

Hurricane Donna (August 29-September 19, 1960). A Category 4 hurricane, this storm is listed among the most intense in U.S. history. It curved northwestward over the Middle Keys before

turning north towards the mainland at Naples and Fort Myers. Wind speeds of 128 mph and central pressure of 28.44 inches were measures. Tide levels ranged from 13.5 feet above MSL at Upper Matecumbe Key, +10 feet at Plantation Key, and 8.9 feet in Key Largo. The high water mark closest to Layton was nearly 8 feet (ocean side, Craig Key Mile Marker 72).

Hurricane Betsy (August 26-September 12, 1965). A Category 3 hurricane, Betsy passed over Marathon moving westward into the Gulf of Mexico. At Tavernier, central pressure was recorded at 18.12 inches and wind speeds were estimated at 120 mph. Flood levels were measures at 9 feet MSL in Key Largo.

Ground Hog's Day Storm (February 2, 1998). This severe weather system produced tornadic activity in the area.

Hurricane Georges (September 25, 1998). Near Layton at Mile-Marker 70, storm debris rendered U.S. 1 impassable to civilian vehicles. The high water marks closest to Layton were 4.6 feet at Mile-Marker 69.5 and 5.7 feet at Long Key State Park Mile-Marker 66.8.

Tropical Storm Mitch (November 4-5, 1998) affected the City of Layton.

Effect of Recent Hurricane Disasters

Damage from Hurricane Georges is representative of Layton's exposure:

- Damaged city property; a reimbursement of over \$7,000 was received for damage to signs and streets, park cleanup, and EOC staffing.
- All private residences that were below the crown of the city's streets received flooding, and most roofs suffered wind damage (shingles). About 2% of homes sustained significant wind damage.
- Due to a 4-day power outage, all businesses were closed or experienced restricted operations.
- Lobster fishermen lost approximately 50% of their traps.

Hurricane Flooding as Predicted by SLOSH Modeling

The National Hurricane Center's surge model, called SLOSH (Sea, Lake, and Overland Surges from Hurricanes), estimates surges associated with different characteristics of tropical cyclones (track, forward speed, wind speed, etc.). The results can be combined with topographic mapping to delineate inland areas subject to flooding (with a margin of error of +/- 20%). The closest available predications are made for Conch Key Mile-Marker 63 and Islamorada Mile-Marker 82 (Table 9-2). Although storm surge flooding cannot be predicted simply at any given location, these charts can be used to approximate surge flooding in Layton.

Table 9-2. SLOSH Maximum Predicted Water Depths above MSL

Ocean Side Mile-Marker 63						Ocean Side Mile Marker 82					
Track Direction	Storm Categories					Track Direction	Storm Categories				
	1	2	3	4	5		1	2	3	4	5
WSW	4	6	8	9	9	WSW	4	5	7	8	9
W	4	6	7	8	9	W	4	6	7	9	10

◆
**NFIP Flood Insurance Policies in
Layton: 99**

Claims paid since 1978: 4

<http://www.fema.gov/nfip/pcstat.shtm>
(as of December 31, 2004)

WNW	4	5	7	8	9	WNW	4	6	7	9	10
WN	4	5	7	7	8	NW	4	6	7	9	10
NNW	4	5	6	7	8	NNW	4	5	7	8	10
N	3	5	6	7	8	N	4	5	7	8	9
NNE	3	4	6	7	8	NNE	4	5	6	8	9
NE	3	5	6	8	9	NE	4	5	6	7	8
ENE	4	6	8	10	11	ENE	3	5	6	7	8
E	5	8	10	11	12	E	3	4	6	7	8

NFIP Floodplain Mapping

Layton has participated in the National Flood Insurance Program (NFIP) since July 1971. The City's current effective Flood Insurance Rate Map, prepared by FEMA, is dated February 19, 2005. The FIRM delineates areas that have been determined to be subject to flooding by the "base flood," the flood that has a 1-percent-annual chance of flooding in any given year (commonly called the 100-year flood).

All land in Layton is subject to flooding; all buildings are subject to some degree of risk depending on type of construction and elevation above grade. Areas designated as VE Zones (coastal flood with velocity hazard wave action) are shown as exposed to flooding ranging from 11-13 feet above MSL. Areas delineated as AE Zones (areas subject to flooding but waves are predicted to be less than 3-feet in height) are exposed to flooding 8-9 feet above MSL.

NFIP Repetitive Loss Properties

Data provided by the Florida Department of Community Affairs identifies properties that are or have been insured by the National Flood Insurance Program and that have received two or more

claims of at least \$1,000. Based on data as of October 2003 there are no repetitive loss properties in Layton.

Severe Storms, Tornadoes, Water Spouts and High Winds (Other than Hurricane)

Layton, like the rest of the Keys, has low-lying terrain. Section 6.2 characterizes the entire area encompassed by Monroe County and the cities as having equal distribution of winds. The risk of severe storms, tornadoes, water spouts and high winds in Layton does not vary from the rest of the planning area. All new buildings, replacement buildings, and additions to existing buildings must comply with the Florida Building Code's wind load requirements.

Rainfall/Ponding Flooding

Layton does not have any identified areas where rainfall/ponding flooding is so severe or prolonged as to cause access problems or damage to buildings.

Drought Hazards

Drought hazards for the planning area are described in Section 6.4. Layton's risk due to drought is comparable the drought risk throughout the area.

Wildland Fire Hazards

The Florida Forestry Department has not indicated that areas in Layton are likely to experience significant risk of wildland or brush fires. The exception to this statement may be along the city's boundary with Long Key State Park where natural vegetation may increase fire hazards during some dry periods.

Risk: Layton's Critical and Important Facilities

Figure 2-2 shows the locations of the City's facilities that are listed in Table 9-3.

Table 9-3. Important and Critical Facilities in Layton

Critical/Essential Facilities: <ul style="list-style-type: none">• City Hall/Fire Rescue Complex• Bell South Mobility Towner• Florida Keys Aqueduct Authority Pumping Station (Mile-Marker 70, Long Key)	Other Facilities: <ul style="list-style-type: none">• Florida Keys Marine Laboratory• U.S. Post Office
Hazardous Materials Sites (302 Facilities): <ul style="list-style-type: none">• None	Mobile Home and Recreational Vehicle Parks (as of October 1995): <ul style="list-style-type: none">• None
Marinas: <ul style="list-style-type: none">• KT's Marina	

9.4 Damage Reduction Activities

On-Going Activities

- The City's Comprehensive Plan policies include provisions for limiting densities in the Coastal High Hazard Area, improving hurricane evacuation timing, and protection of native vegetation and natural shorelines.
- Other measures dealing with hazard planning include the consideration of mobile home restrictions and the need to increase the availability of emergency generators for use in the City.
- The Building Department implements mitigation policies reflected in the Building Code and Land Development Regulations, including standards to reduce vulnerability to high wind load and enforcement of the "substantial improvements" rule.
- The Planning Department implements mitigation measures reflected in the Comprehensive Plan and Land Development Regulations, including regulations designed to minimize damage to structures from wind and waves resulting from storms and floodplain management controls.
- New construction must include storm shutters designed to resist design winds of 159 mph and debris impacts.
- The Comprehensive Plan calls for engineering and other analyses to be undertaken before post-disaster redevelopment is undertaken so that appropriate building regulations can be adopted and design guidelines established for replacement or repair of infrastructure.

Layton participates in the Community Rating System (CRS) of the National Flood Insurance Program. The CRS recognizes actions that exceed the minimum requirements. In return, the City's property owners enjoy a 10% reduction in the cost of NFIP flood insurance. Actions undertaken by the City include:

- Maintains elevation certificates
- Makes NFIP map determinations
- Sends annual NFIP mailings to all local lenders, realtors, and insurance companies
- Keeps NFIP library in City Hall
- Warns citizens of impending flooding

Recent Projects

In 2002, with a Federal-State Hazard Mitigation Grant, the City of Layton installed hurricane retrofit measures to the City Hall/Fire Station to meet the 159 miles per hour standards. The total cost was \$75,000 (50% Federal, 25% State, 25% City).